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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/555,956	11/07/2005	Martin Krumpelmann	P70882US0	9440

136 7590 07/24/2009

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EXAMINER	
YAN, REN LUO	
ART UNIT	PAPER NUMBER
2854	
MAIL DATE	DELIVERY MODE
07/24/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/555,956	KRUMPELMANN ET AL.	
	Examiner	Art Unit	
	Ren L. Yan	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 - 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (Pub. No.: EP 1205300A1) in view of Dimyan et al. (US patent No. 4176404).

With respect to claim 1, Ikeda et al. disclose in Figs. 3, and 7 - 9 and [0039] lines 1 – 10: a color rotary printing machine (Fig. 8), comprising:

one printing plate support ([0004] lines 1 - 4) each is assigned to colors (black, yellow, red and blue) to be transferred on to a printing plate (on cylindrical surface), said plate support supporting the printing plate and being attached to a mandrel or cylinder (82, 72, 62 and 52) of a rotary printing machine in order to transfer the printing image onto the printing substrate (93 in Fig. 8),

register devices (4, 5 in Fig. 3) that determine positions ([0062] lines 3 – 6 and [0063] lines 6 - 10) of the printing plates with respect to one another, the register devices (4, 5) including sensors (4 in Figs. 3 and 7 aw well as 91 in Fig. 9) that determine positions of the printing plate support in the printing machine, and the register devices (4, 5) providing information regarding the position of the printing plate support before, or at the start of, or during

the print process (operation state) in conjunction with the sensors (4, 91) based on which control signals are provided ([0039] lines 1 - 10),

the register device (4, 5) including a control device (103 in Fig. 7) with which control signals are generated based on the positions of the printing plate support determined by the sensors (4, 91) with which drives (84 in Fig. 3) of the mandrels or the print cylinders (73) are controllable (by 103 in Fig. 7 and [110] lines 4 - 10) using said control signals such that phase positions of the mandrels or the print cylinders (73) in relation to one another is changed and a register accuracy of the print increases ([0015] lines 4 - 6),

each printing plate support including at least one information carrier (90 in Fig. 9 and [0010] lines 1 - 3) from which information is removed using the sensor (4, 91), the information that is read out being automatically suitable for determining the relative position of the printing plate support on the mandrel or on the print cylinder (73) of the rotary printing machine ([0009] lines 3 - 6), and the information carrier (90) being arranged outside the mandrel ([0009] lines 1 – 3) and between the print image and an edge of the printing plate support that is turned toward a front end of the mandrel or of the print cylinder (73).

Ikeda et al. teach all the limitations of claim 1 except that the information carrier 90 is an optical type rather than an information carrier that includes a sequence of magnetizable individual elements from which information is removed by the sensor.

However, Dimyan et al. teach in Figs. 1 - 2 as well as column 3 lines 42 – 44, column 2 lines 49 – 56, column 4 lines 28 – 34, column 6 lines 28 -32 and column 7 lines 14 - 29: the information carrier that includes a sequence of magnetizable individual elements (14, 16 and 22 in Fig. 1) that is read out magnetically by detector (74/75) in Fig. 2.

One of ordinary skill in the art would have recognized from the teaching of Dimyan et al that the use of the information carrier having a sequence of magnetizable individual elements would improve the information carrying capability due to its enhanced storage density area when applied as the information carrier in the multi-color rotary printing machine of Ikeda et al.

Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention to have modified Ikeda et al.'s multi-color rotary printing machine by using the known information carrier having a sequence of magnetizable individual elements along with a suitable sensor as taught by Dimyan et al to improve the optical information carrier to achieve the predictable result of increased information storage density capability of the information carrier.

With respect to Claim 2, Ikeda et al, as modified by Dimyan et al (in Fig. 9 of Ikeda et al.) teaches wherein the information carrier (90) has an oblong shape whereby its long side that is essentially aligned in a peripheral direction of the printing plate support ([0009] lines 1 – 3).

With respect to Claims 3 and 9, Ikeda et al, as modified by Dimyan et al (in Fig. 9 of Ikeda et al.) teaches wherein the information carrier (90) surrounds a periphery of the mandrel or of the cylinder (73) of the printing machine ([0009] lines 1 – 3).

With respect to Claims 4 and 10 - 11, Ikeda et al, as modified by Dimyan et al teaches (in Figs. 1 - 2 and column 7 lines 14 - 29) wherein the information stored on the information carrier (having a layer of magnetic materials) is magnetically readable by sensor 74/75.

With respect to claims 5 and 12 - 14, Ikeda et al, as modified by Dimyan et al teaches (Fig. 9 and [0009] lines 1 - 3) wherein the information carrier includes a magnetic tape (with a layer of magnetic materials or film as taught by Dimyan et al.).

With respect to Claim 6, Ikeda et al, (in Figs. 3, and 7 - 9 of Ikeda et al.) a process for setting up a multi-color rotary printing machine before and at start of a print process, comprising:

assigning one printing plate support ([0004] lines 1 - 4) each to colors (black, tallow, red and blue) to be transferred on to a printing plate (on cylindrical surface), said plate support supporting the printing plate;

attaching the printing plate supports to mandrel or cylinders (82, 72, 62 and 52) of the rotary printing machine in order to transfer the printing image onto the printing substrate (93 in Fig. 8);

determining with the register devices (4, 5 in Fig. 7) a position ([0062] lines 3 – 6 and [0063] lines 6 – 10) of the printing plates with respect to one another,

the register devices (4, 5) including sensors (4) that determine positions of the printing plate support in the printing machine and

the register devices (4, 5) providing information based on the positions of the printing plate supports determined by the sensors (4),

with control signals (arrow from 4 - 16) being derived based on the information and

the register device (4, 5) including a control device (103) that generates control signals based on the positions of the printing plate support determined by the sensors (4, 91);

using the control signals (103 – 104 – 84/64) to control drives (84 and 64 in Figs. 3 and 8) of the mandrels or of the print cylinders (73 and 53) in such a manner that a phase position of the mandrels or of the print cylinders (73 and 53) in relation to one another is changed,

so as to increase a register accuracy of the print ([0015] lines 4 - 6),

the printing plate supports each having at least one information carrier (90) that includes positional information of the printing plate support that is removed using the sensor (4, 91); and

reading the information automatically (by 4, 91) and using the information to determine a relative position (by 16 in Fig. 7) of the print plate support on the mandrel or on the print cylinder of the rotary printing machine ([0039] lines 1 - 10),

with printing plates being used such that the information carrier (90) is arranged outside the printing plate (Fig. 9 and [0009] lines 3 – 6) and

between the print image and an edge of the printing plate support that is turned toward a front end of the mandrel or of the print cylinder (73).

Ikeda et al. teach all the limitations of claim 6 except that the information carrier 90 is an optical type rather than an information carrier that includes a sequence of magnetizable individual elements from which information is removed by the sensor.

However, Dimyan et al. teach in Figs. 1 - 2 as well as column 3 lines 42 – 44, column 2 lines 49 – 56, column 4 lines 28 – 34, column 6 lines 28 -32 and column 7 lines 14 - 29: the information carrier that includes a sequence of magnetizable individual elements (14, 16 and 22 in Fig. 1) that is read out magnetically by detector (74/75) in Fig. 2.

One of ordinary skill in the art would have recognized from the teaching of Dimyan et al that the use of the information carrier having a sequence of magnetizable individual elements would improve the information carrying capability due to its enhanced storage density area when applied as the information carrier in the multi-color rotary printing machine of Ikeda et al.

Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention to have modified Ikeda et al.'s color rotary printing machine by using the known

information carrier having a sequence of magnetizable individual elements along with a suitable sensor as taught by Dimyan et al to improve the information carrier to achieve the predictable result of increased information storage density capability of the information carrier.

With respect to Claim 7, Ikeda et al, as modified by Dimyan et al teaches (in Figs 3, and 7 - 9 of Ikeda et al.) wherein during the change of the relative phase position of the mandrels or the print cylinders (82, 72, 62 and 52 in Fig. 8), the printing plate supports ([0004] lines 1 - 4) rest in relation to the mandrels or print cylinders assigned thereto.

With respect to claim 8, Ikeda et al, as modified by Dimyan et al teaches (in Figs. 3, and 7 - 9 of Ikeda et al.) wherein the multi-color rotary printing machine includes the printing plate support ([0004] lines 1 - 4) each is assigned to colors (black, yellow, red and blue) to be transferred on to a printing plate (on cylindrical surface), said plate support supporting the printing plate and

said printing plate support being attached to the mandrel or cylinder (72) of the rotary printing machine in order to transfer the printing image onto the printing substrate (93),

the rotary printing machine having the register devices (4, 5 in Fig. 7) that determine the positions of the printing plates with respect to one another and

the register devices (4, 5) having the sensors (4, 91) that determine the positions ([0062] lines 3 – 6) of the printing plate support in the printing machine and

the register devices (4, 5) providing the information regarding the positions of the printing plate support before, at the start of, or during the printing process ([0039] lines 1 – 7) in conjunction with the sensors (4, 91),

based on which the control signals (16 – 103 – 105 in Fig. 7) are provided,

the register devices (4, 5) having the control device (103 in Fig. 7) that generates the control signals based on the positions of the printing plate support determined by the sensors (4, 91) that controls the drives (64 and 84 in Fig. 8) of the mandrels or the of print cylinders (52, 62, 72 and 82) using said control signals such that the phase position of the mandrels or the print cylinders (52, 62, 72 and 82) in relation to one another is changed,

and the register accuracy of the print increases ([0015] lines 4 - 6),

with each of the printing plate supports containing that at least one information carrier having a sequence of individual magnetizable elements from which the information is removed using the sensor, with the information is read out automatically being suitable for determining the relative position of the printing plate support on the mandrel or on the print cylinder (72/73) of the rotary printing machine ([0009] lines 3 - 6), and

with the information carrier being arranged outside ([0009] lines 1 – 3) the printing mandrel and between the print image and the edge of the printing plate support that is turned toward the front end of the mandrel or of the print cylinder (73 in Fig. 9).

With respect to Claim 15, Ikeda et al, as modified by Dimyan et al teaches (in Fig. 9 and (Fig. 9 and [0009] lines 1 - 3 of Ikeda et al) the information carrier's shape is rectangular.

With respect to Claim 16, Ikeda et al (in Figs 3, and 8 - 9 of Ikeda et al.) teaches a multi-color rotary printing machine, comprising:

a printing plate support ([0004] lines 1 - 4) that supports a printing plate (on cylindrical surface) and that is assigned to colors (black, yellow, red and blue) to be transferred onto the printing plate, the printing plate support being attached to a mandrel or a cylinder (82, 72, 62 and

52) of the machine in order to transfer a print image onto a print substrate (93 in Fig. 8) during a printing process; and

register devices (4, 5 in Fig. 7) that determine positions of the printing plates with respect to one another, the register devices (4, 5) including sensors (4 in Fig. 7 and 91 in Fig. 9) that determine positions of the printing plate support in the machine and the register devices (4, 5) providing information regarding the positions of the printing plate support before, at the start of, or during the printing process ([0039] lines 1 – 8) in conjunction with the sensors (4, 91) based on which control signals are provided, the register devices including a control device (103) that generates control signals based on the positions of the printing plate support determined by the sensors (4, 91) and with which drives (64 and 84 in Fig. 8) of the mandrels or the print cylinders (52, 62, 72 and 82) are controllable using said control signals such that a phase position of the mandrels or the print cylinders (52, 62, 72 and 82) in relation to one another is changed and a register accuracy of the print increases ([0015] lines 4 – 6),

each printing plate support including at least one information carrier (90 in Fig. 9) from which information is removed using the sensor (91), the information carrier (90) having a sequence of information carrying elements, with the information that is removed by sensors 4, 91 and being automatically adapted for determining (16 in Fig. 7) the relative position of the printing plate support on the mandrel or on the print cylinder (72/73), and

the information carrier (90) being arranged outside the printing mandrel and between the print image and an edge of the printing plate support that is turned toward a front end of the mandrel or of the print cylinder (Fig. 9).

Ikeda et al. teach all the limitations of claim 16 except that the information carrier 90 is an optical type rather than an information carrier that includes a sequence of magnetizable individual elements from which information is removed by the sensor.

However, Dimyan et al. teach in Figs. 1 - 2 as well as column 3 lines 42 – 44, column 2 lines 49 – 56, column 4 lines 28 – 34, column 6 lines 28 -32 and column 7 lines 14 - 29: the information carrier that includes a sequence of magnetizable individual elements (14, 16 and 22 in Fig. 1) that is read out magnetically by detector (74/75) in Fig. 2.

One of ordinary skill in the art would have recognized from the teaching of Dimyan et al that the use of the information carrier having a sequence of magnetizable individual elements would improve the information carrying capability due to its enhanced storage density area when applied as the information carrier in the multi-color rotary printing machine of Ikeda et al.

Therefore it would have been obvious to a person of ordinary skill in the art at the time of invention to have modified Ikeda et al.'s color rotary printing machine by using the known information carrier having a sequence of magnetizable individual elements along with a suitable sensor as taught by Dimyan et al to improve the information carrier to achieve the predictable result of increased information storage density capability of the information carrier.

With respect to Claim 17, Ikeda et al, as modified by Dimyan et al teaches wherein the information carrier (90) has a rectangular shape with a long side that is substantially aligned in a peripheral direction of the printing plate support ([0009] lines 1 - 3).

Applicant's arguments filed on 3-26-2009 have been fully considered but they are not persuasive.

Applicant argued that Ikeda's rotational phase difference detecting system is only able to detect and correct the phase difference between the cylinders while applicant's claimed device is able to detect and correct the *topological position* (horizontal and vertical) of the cylinders. Thus, applicant concludes that Ikeda fails to teach each feature of applicant's claimed machine for the topological registering process. This argument is not persuasive because applicant is arguing a limitation that is not reflected in the claims under consideration. Ikeda does teach to detect and correct the phase difference between the cylinders as acknowledged by applicant and the claimed invention is directed to the same concept. In lines 16-22 of pending claim 1, the recitation reads "the register devices including a control device with which control signals are generated based on the positions of the printing plate support….. such that a phase position of mandrels or the print cylinders in relation to one another is changed". (independent claims 6 and 16 have the similar limitation) This is exactly what is taught by Ikeda. In fact, none of the pending claims require detecting and correcting the topological position (horizontal and vertical) of the cylinders as argued by applicant.

Applicant also argued that combining the teachings of Ikeda and Dimyan would not lead to applicant's claimed invention because the color-mark-sensor of Ikeda is not capable of the readout of the topological information of Dimyan's storage tape. This argument is also not persuasive. First of all, in view of the teaching of Dimyan with the use of the magnetizable information carrier, one of ordinary skill in the art would be motivated to apply this information carrier to the multi-color rotary printing machine of Ikeda for its known increased information storage capability. Second, when this information carrier is applied to the printing machine of Ikeda, one of ordinary skill in the art would have the knowledge and skill to provide the printing

machine of Ikeda with a sensor as taught by Dimyan that is capable of reading or retrieving the information carried by the magnetizable information carrier and communicating the readout information with the controller. Accordingly, the combination of the applied Ikeda and Dimyan fully meets all the features as claimed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ren L. Yan whose telephone number is 571-272-2173. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ren L Yan/
Primary Examiner, Art Unit 2854
July 22, 2009